In re Patent Application of: Donald H. Gehring

IN THE SPECIFICATION:

Please delete paragraph [00024] and replace with the following:

[0024] A oil tanker is a very stable flotation platform and so are a plurality of individual cargo tanks that form the tanker since the width of each cargo tank is greater than its depth. Thus, a cargo tank section removed from the tanker would also be inherently stable and can form the basis of a new hull design for a multi-flat sided floating offshore platform. Referring to Figure 9, shown is a hydrodynamically improved deep water multi-flat sided floating offshore platform 20 including a buoyant hull 21 having a nearly flat top 23 forming a deck, a substantially flat bottom 25, and a plurality of substantially flat sides 27 constructed in accordance with an embodiment of the present invention (described later). The top 23 of the hull 21 can be best described as nearly flat because the top 23 is preferably made of flat panels but that are connected with a slight slope to allow water drainage. The buoyant hull 21 can be formed from a plurality of existing adjacent intact oil tanker cargo tanks sections 31 from an existing oil tanker 30 (Figure 1) or from new construction based on the flat-panel design used in oil tankers 30 (described later).

Please delete paragraph [00025] and replace with the following:

[00025] Referring to Figures 6, 8, and 9, in most embodiments of the present invention, as with nearly all floating offshore platforms, the platform 20 provides for access for a plurality of risers 33. A plurality of riser slot apertures 35 are positioned in a generally circular fashion about the center area of the bottom 25 of the hull 21, which allow passage of a corresponding plurality of risers 3533 through the hull 21. Another plurality of top riser slot apertures 37 are also positioned in a generally circular fashion about a center area of the top 23 of the hull 21, which allow passage of the plurality of risers 33 to the deck or top 23. The top riser slot apertures 37 are positioned in a matching axial relationship with the bottom riser slot apertures 35 to allow passage of risers 33 to the deck or top 23. Riser guide sleeves 39 can be positioned between the top riser slot apertures 37 and the corresponding bottom riser slot apertures 35 to provide guides for the positioning of the risers 33. At least the bottom 25 of the hull 21 is preferably sealed about a lower section of the riser guide sleeves 39 to prevent a loss of

In re Patent Application of: Donald H. Gehring

buoyancy for the entire compartment or compartments affected by forming the bottom riser slot apertures 35 for the riser guide sleeves 39.

Please delete paragraph [00028] and replace with the following:

Referring again to Figure 9, the tendon access shaft 45 can include a tendon [00028] access shaft extension 49 extending below the bottom 25 of the hull 21 to provide the connection of the one or more tendons 47. The tendon access shaft extension 49 can be part of a unitary tendon access shaft or a separate component attached to the tendon access shaft. The body of both the tendon access shaft 45 and tendon access shaft extension 49 can be formed in a variety of geometric shapes but are preferably of a cylindrical or square form. The tendon access shaft 45, which may or may not include the tendon access shaft extension 49, can include a tendon connector 51 (Figure 10) having a tendon connection aperture 53 for connecting a single tendon (Figure 10)-to the tendon access shaft 45. Alternatively, the tendon access shaft can instead include a tendon connector 51' (Figure 11) having a plurality of tendon connection apertures 53' (Figure 11) for connecting a plurality of tendons 47 to the tendon access shaft 45. The tendon connection apertures 53 can support rigid fixed tendons, tendons with flex joints or revolving turret mounted tendons. The tendon or tendons 47 can be made of many types of material including steel and many types of structure shapes including pipe, rope or chain. The tendon 47 can be either buoyant, non-buoyant, or partially buoyant and still be within the scope of the present invention.

Please delete paragraph [00033] and replace with the following:

[00033] Referring to Figure 1, shown is an example oil tanker 30 having a plurality of cargo tank sections 31, each subdivided into individual compartments 71, and from which the hull 21 can be constructed. When constructed from an existing oil tanker 30, the hull 21 can make use of the tanker top decks 73, tanker bottoms 75, tanker side shells 77, and pre-existing tanker vertical internal watertight bulkheads 79 to inexpensively construct the multi-sided floating offshore platform 20. Referring to Figure 2, each cargo tank section 31 is divided from the next cargo tank section 31 by watertight bulkheads 79. Each watertight bulkhead 79 (dividing wall) of each cargo tank section 31 includes stiffeners 81, typically only on one side

with the opposite side being a smooth flat surface. The stiffeners 81 provide each cargo tank section 31 sufficient structural integrity when void and with the oil tanker 30 at maximum draft. Oil tankers and floating offshore platforms must resist similar environmental conditions. Thus, each cargo tank section 31 can serve as the basis for construction of the new buoyant hull 21. In this embodiment of the present invention, preferably primarily only intact cargo tank sections 31 of the existing oil tanker 30 should be used to form the base structure of the new hull 21. Use of near intact cargo tank sections 31, rather than merely cutting individual flat panels from the existing oil tanker 30, saves new material and labor costs. Some of the existing oil tanker equipment could also possibly be reused. For example, generators, electrical equipment, instrumentation, communication equipment, pumps, valves, lifeboats, rafts, safety systems, the MCC, accommodation block and the control room, are all examples of equipment that may be reused. Equipment such as the existing crude oil pumping system could also be converted to use as a ballast system.

Please delete paragraph [00032] and replace with the following:

[00032] As stated above, the buoyant hull 21 of the multi-flat sided floating platform 20 can advantageously be constructed from such a section 31 (see Figure 1) of an existing oil tanker 30 or can be from newly constructed materials based upon flat panel oil tanker type construction. Particularly, the design of the hull 21 can advantageously be based on the proportions of the oil tanker from which the hull or hull design was taken.

In re Patent Application of:
Donald H. Gehring

Please delete paragraph [00042] and replace with the following:

[00042] The hull 21 may require additional internal vertical bulkheads, such as bulkheads 79, be added. In fact, the hull 21 may require additional vertical or horizontal bulkheads to further increase the number of water tight compartments in the hull 21. The number of required watertight bulkheads may depend on the flooded compartment criteria that must be met by the design. For example, the normal damaged criteria for offshore platforms is for one compartment to be flooded and the hull and mooring system not be overstressed with an associated design storm event. The addition of the bulkheads 79 can be accomplished by obtaining the bulkhead material from, for example, other tanker sections 31, cutting the bulkhead material to form the new bulkhead sized to fit in the new hull 21, cutting slots in the top 23 (deck) of the new hull 21, and lowering the new bulkhead through slots cut in the top 23. Once the new bulkheads are in place, each affected bulkhead should be re-welded to preferably at least its original strength and should be made watertight.